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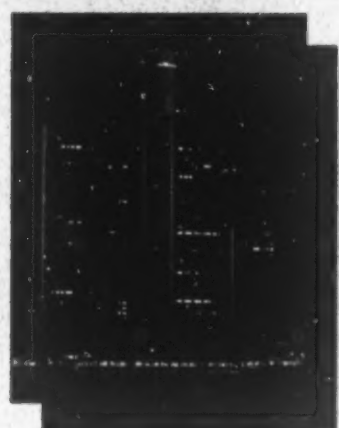
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**MARCH
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THE MAGAZINE FOR
GROWING COMPANIES

Inc.

THE MOST ENTREPRENEURIAL CITIES IN AMERICA



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by
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LETTERS

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How does CompuAdd's new management structure deal with this level, where customers are won—or, in this case, lost?

Diana M. Schneider
President
Demos Publications Inc.
New York City

MORE ON VALUES

Way back in October, senior writer Tom Richman wrote a profile of Tom Chappell, founder and CEO of Tom's of Maine Inc. It was really the story of a quest: Chappell's search for meaning and values both in and beyond his business, a search that ultimately led him to study at Harvard Divinity School. Even now, readers are responding.

The portrayal of Chappell's spiritual odyssey and its effects on his company is the best piece of business journalism I have read in years. I was struck by the clarity with which the article conveyed his reflections on purpose, values, and vision in business. Many of us carry such convictions in our guts, inchoate and unformed until we meet them fully realized.

Anne DeMarsay
Editor-in-Chief
Educational Services Institute Magazine
Falls Church, Va.

HOUSE OF CORRECTIONS

Four companies were omitted from the 1989 INC. 500 list printed in last December's issue. The companies are listed below, along with their cities, lines of business, and five-year growth rates. We regret the error.

Async Corp.; Atlanta; provides voice-mail services; 4,998%

H. D. Vest Inc.; Irving, Tex.; provides financial products and services; 3,184%

KVH Industries Inc.; Middletown, R.I.; manufactures navigational equipment; 2,579% (1988 rank #176)

West Coast Video; Philadelphia; owns and franchises video rental stores; 2,517% (1988 rank #4).

INC. wants to know what you think. Please address all correspondence to INC. Letters Editor, 38 Commercial Wharf, Boston MA 02110, or call our editorial commentary line toll free at (800) 444-1756. (Messages will be recorded.) Please include name, address, and telephone number for verification. Letters must be signed, and all correspondence may be edited for space and style.



THE MOST ENTREPRENEURIAL CITIES IN AMERICA

Why some cities boom while others languish

BY JOHN CASE

Remember when you could tell how a city was doing by asking a knowledgeable question or two? In Cleveland you inquired about heavy-industry output, in Hartford about insurance. If airplane production was booming, so was Seattle.

Today, metropolitan prosperity seems to swell and recede for a hundred different reasons. Drive around Milwaukee, for example, and check out the shuttered, crumbling Allis-Chalmers Corp. complex, one of many moribund factories that once employed thousands of industrial workers. Then try to figure out why the region's unemployment rate is a tight 4%, and why the city's downtown is booming. Or drive around greater Houston, as staff writer Leslie Brokaw did not long ago (see "The Woodlands, Tex.," page 54). Oil isn't going anywhere—but the Houston metro area is coming back fast.

All of which leads to a suggestion: scrutinize INC.'s 1990 ranking of entrepreneurial hot spots carefully. The list itself is simple enough, indexing metropolitan regions by job growth, business starts, and proportion of high-growth companies. But we think you'll find some surprises, both in the rankings themselves and in what our writers discovered as they set out to places as disparate as Las Vegas and northern New Jersey



The wealth of cities: in an entrepreneurial economy, metropolitan regions prosper in unexpected ways.

in search of the many new reasons for economic vitality.

Regional growth, after all, is a subject too important to be left to politicians and booster clubs. How your city is faring has a direct impact on how your business fares. And if you need to know where to find new customers, or new employees, or a site for a new branch—well, then, you'll need a mental map of America, color-coded for growth. The trick is to keep it up to date, which means understanding the distinctive features of 1990s-style economic development.

One phenomenon is so pervasive we've devoted a whole section to it: see David L. Birch's "Here Comes the Neighborhood," page 52, and the accompanying firsthand reports. If you don't mind an awkward phrase, call it the localization of growth.

Once, a metropolitan area rose and fell pretty much as a unit. Today, by contrast, you can find pockets of hothouse-style

growth in and around cities that are otherwise languishing. Take Philadelphia: the region as a whole is a mediocre #88 on this year's ranking, down from an almost-as-mediocre #74 last year. But don't talk slow growth to the people and companies in the Route 202 corridor just west of the city; out there, roads that were country lanes only a few years ago are straining under the burden of rush-

hour traffic from dozens of new office and industrial parks.

Phenomenon two: growth now depends on the role a city plays in the world marketplace, not just in the national economy. International trade was always important to big manufacturing centers and cities with deep-water ports. But the emerging global village has churned up a dozen new niches for enterprising metro areas.

Examples? The Battle Creek-Kalamazoo region in Michigan jumped from #130 last year to #57 this year, partly on the strength of \$250 million pumped into the area by Japanese auto-parts and cable-parts companies. El Paso (#35) has capitalized on the so-called maquiladora program, the production-sharing arrangement between U.S. and Mexican factories—and is transforming itself from a sleepy, low-skill factory town into a sophisticated center of high-value manufacturing. And little Erie, Pa., taking advantage



The one Rustbelt city that just won't stop growing

#27 COLUMBUS, OHIO

Think boomtown. Think growth. Think . . . Central Ohio? If you didn't, think again. In the four years INC. has compiled its report on fast-growing cities, Columbus has been the only midwestern city to place in the top 50 each year. This year, Columbus is the top-ranked city in the industrial Midwest.

What's the secret? Largely the fact that Columbus is in the Rustbelt, but not of it. Because it's a state capital, about one worker in six is employed by state or local government—about the same as work in manufacturing. Of the city's top five employers, four are in the public sector (the state, Ohio State University, Columbus public schools, and the city of Columbus); the fifth is an insurance company. In business, the city excels in banking, insurance, distribution, and fast food. Columbus's boosters like to boast that the city's diversified economy is almost recession-proof. Maybe they're right: it's the only major city in the northeast quadrant of the United States to experience sustained growth since 1970.

Then there's that buzzword, quality of life. The city is clean, with good schools, reasonably priced housing, and a college-town atmosphere that helps attract and retain young people. Although it has surpassed Cleveland as Ohio's largest city, Columbus still has a certain small-town feel. "There's a great deal of civic pride in Columbus," says Larry Clark, co-owner of a catering business, Made from Scratch. "People really come after you to get involved."

Such sentiments are common among business boosters everywhere—but in Columbus, everyone seems to agree. Across the nation, says James Challenger, president of the outplacement firm Challenger, Gray & Christmas Inc., some 35% to 40% of his company's clients ended up going to a new city to get a job last year. Only about 1% will agree to leave Columbus.

Columbus ranks high in the section of INC.'s index that counts fast-growth companies. That's only fitting: the city is home to The Limited, Wendy's, CompuServe, and other entrepreneurial stars. But it has also attracted large corporations to the area, notably the immigrant Honda of America plant in nearby Marysville.

Drawbacks? A few. While Chamber of Commerce execs will say that both Battelle Memorial Institute and Ohio State spin off high-tech firms, they can name only one offhand. That may not be coincidence. "I would never move a high-tech company to Columbus," says James Ebright, whose Software Results Corp. nevertheless made the INC. 500 in 1983 and '84. "The infrastructure isn't really there." Then, too, Columbus lacks big-city attractions such as major-league sports teams.

All in all, there's probably no better summary of the city's strength and weaknesses than this one from a growth-company CEO who has lived there since childhood. "Columbus is a nice place to live," he says. "But you wouldn't want to visit there."

—Martha E. Mangelsdorf

METRO RANKING

1. Las Vegas, NV (6)
2. Washington, DC (5)
3. Orlando, FL (2)
4. Tallahassee, FL (61)
5. San Jose, CA (13)
6. Atlanta, GA (7)
7. Charleston, SC (19)
8. Lincoln, NE (72)
9. Raleigh-Durham, NC (4)
10. Anaheim, CA (8)
11. Charlotte, NC (29)
12. Hickory, NC (76)
13. Wilmington-Jacksonville, NC (36)
14. Ventura, CA (27)
15. Nashville, TN (15)
16. San Diego, CA (11)
17. Chattanooga, TN (96)
18. Greenville-Spartanburg, SC (84)
19. Fort Myers, FL (14)
20. Sioux Falls, SD (92)
21. Stockton-Modesto, CA (67)
22. Reno, NV (31)
23. Baltimore, MD (35)
24. Jackson, MS (73)
25. Lancaster, PA (51)
26. Fort Pierce, FL (21)
27. Columbus, OH (37)
28. Jacksonville, FL (16)
29. Lexington, KY (24)
30. Norfolk-Portsmouth, VA (18)
31. Richmond, VA (30)
32. Honolulu, HI (93)
33. Atlantic City, NJ (46)
34. Tampa-St. Petersburg, FL (33)
35. El Paso, TX (40)
36. Huntsville, AL (22)
37. West Palm Beach, FL (3)
38. Melbourne-Titusville, FL (56)
39. Fort Lauderdale, FL (NR)
40. Seattle, WA (43)
41. Portsmouth, NH (9)
42. Panama City-Fort Walton Beach, FL (23)
43. Reading, PA (153)
44. Grand Rapids, MI (58)
45. Riverside-San Bernardino, CA (12)
46. Madison, WI (75)
47. Columbia, SC (20)
48. Wilmington, DE (42)



1. Lincoln, Nebr.
2. Washington, D.C.
3. Sioux Falls, S. Dak., and Reading, Pa. (tie)

Source: Cognetics Inc., Cambridge, Mass.

of newly liberalized trade with Canada, has climbed from #125 last year to #58 this year.

More and more cities are learning just how valuable a complex of colleges and universities can be to economic development. You expect to find technology-oriented growth around such higher-education centers as Boston and San Francisco. But look at Lincoln, Nebr., #8, home of a 20,000-student university, or Tallahassee, Fla., which

jumped from #61 to #4, thanks in part to growing academic institutions such as Florida State University (28,000 students, up 5,000 from a few years ago) and Florida A&M University (which has seen a 36% increase in enrollment since 1984). "There's a good work force here," says a spokesman for General Dynamics Electronic Division, which recently decided to locate a major manufacturing facility in Tallahassee. "And

1990 Rank/City, State/1989 Rank

- | | | |
|---------------------------------------|---------------------------------------|---|
| 49. Houston-Galveston, TX (126) | 97. Fayetteville, NC (141) | 145. New Orleans, LA (175) |
| 50. Mobile, AL (101) | 98. Tucson, AZ (25) | 146. Long Island, NY (106) |
| 51. Miami, FL (63) | 99. Roanoke, VA (104) | 147. Fresno, CA (129) |
| 52. Sacramento, CA (49) | 100. Eugene, OR (120) | 148. Macon, GA (105) |
| 53. Asheville, NC (117) | 101. Lafayette, LA (188) | 149. Bloomington-Champaign, IL (136) |
| 54. Los Angeles, CA (59) | 102. Boston, MA (53) | 150. Scranton-Wilkes Barre, PA (155) |
| 55. Indianapolis, IN (32) | 103. Johnson City-Kingsport, TN (138) | 151. Poughkeepsie, NY (112) |
| 56. Greensboro-Winston-Salem, NC (41) | 104. Denver-Boulder, CO (94) | 152. Odessa-Midland, TX (191) |
| 57. Battle Creek-Kalamazoo, MI (130) | 105. Pittsfield, MA (145) | 153. Austin, TX (17) |
| 58. Erie, PA (125) | 106. Chicago, IL (119) | 154. Johnstown-Altoona, PA (160) |
| 59. Green Bay, WI (100) | 107. Little Rock, AR (137) | 155. Monterey, CA (70) |
| 60. Savannah, GA (65) | 108. Fort Wayne, IN (45) | 156. Milwaukee, WI (121) |
| 61. Des Moines, IA (124) | 109. New York, NY (108) | 157. Hartford, CT (85) |
| 62. Columbus, GA (158) | 110. Cincinnati, OH (90) | 158. Spokane, WA (149) |
| 63. Dallas-Fort Worth, TX (26) | 111. Pittsburgh, PA (139) | 159. Lubbock, TX (181) |
| 64. Louisville, KY (71) | 112. Syracuse, NY (98) | 160. Metro New York (NY), NY (114) |
| 65. Santa Barbara, CA (109) | 113. Rochester, NY (83) | 161. Williamsport-State College, PA (146) |
| 66. Memphis, TN (57) | 114. Springfield, MO (77) | 162. Longview, TX (170) |
| 67. Toledo, OH (99) | 115. Detroit, MI (89) | 163. Youngstown, OH (131) |
| 68. Gainesville, FL (38) | 116. Binghamton-Elmira, NY (116) | 164. Oklahoma City, OK (184) |
| 69. Portland, ME (39) | 117. Omaha, NE (103) | 165. New Bedford-Fall River, MA (150) |
| 70. Minneapolis-St. Paul, MN (50) | 118. Bridgeport-Stamford, CT (66) | 166. New London, CT (133) |
| 71. Anniston-Gadsden, AL (142) | 119. Bakersfield, CA (151) | 167. Cedar Rapids, IA (132) |
| 72. York, PA (78) | 120. Pensacola, FL (48) | 168. Canton, OH (163) |
| 73. Birmingham, AL (54) | 121. Cleveland-Akron, OH (134) | 169. Utica-Rome, NY (173) |
| 74. Portland, OR (102) | 122. Lansing, MI (113) | 170. Waco-Killeen, TX (123) |
| 75. Montgomery, AL (47) | 123. Providence, RI (118) | 171. Saginaw-Bay City, MI (164) |
| 76. Metro New York (NJ), NJ (69) | 124. San Antonio, TX (55) | 172. Rockford, IL (128) |
| 77. San Francisco-Oakland, CA (88) | 125. Lakeland-Winter Haven, FL (87) | 173. Lafayette, IN (171) |
| 78. Sarasota, FL (34) | 126. Evansville, IN (159) | 174. Anchorage, AK (174) |
| 79. Phoenix, AZ (10) | 127. Augusta, GA (97) | 175. Corpus Christi, TX (185) |
| 80. Knoxville, TN (62) | 128. Worcester, MA (64) | 176. Springfield, MA (144) |
| 81. Daytona Beach, FL (80) | 129. Brownsville, TX (168) | 177. Fort Collins, CO (157) |
| 82. Boise, ID (95) | 130. Buffalo, NY (140) | 178. Duluth, MN (179) |
| 83. Baton Rouge, LA (122) | 131. Fargo, ND (115) | 179. Beaumont, TX (183) |
| 84. Salt Lake City, UT (79) | 132. Huntington, WV (161) | 180. Flint, MI (154) |
| 85. Dayton, OH (107) | 133. Kansas City, MO (86) | 181. Yakima-Richland, WA (186) |
| 86. Harrisburg, PA (81) | 134. St. Louis, MO (111) | 182. Visalia, CA (156) |
| 87. Manchester-Nashua, NH (1) | 135. Fort Smith-Fayetteville, AR (52) | 183. Colorado Springs, CO (110) |
| 88. Philadelphia, PA (74) | 136. Tulsa, OK (169) | 184. Amarillo, TX (187) |
| 89. Peoria, IL (172) | 137. New Haven, CT (82) | 185. Shreveport, LA (189) |
| 90. Lima, OH (135) | 138. Lynchburg, VA (182) | 186. Springfield, IL (166) |
| 91. Salem, OR (147) | 139. Anderson-Muncie, IN (180) | 187. Davenport-Rock Island, IL (177) |
| 92. South Bend, IN (44) | 140. Topeka-Lawrence, KS (143) | 188. Monroe, LA (178) |
| 93. Rochester, MN (165) | 141. Biloxi, MS (127) | 189. Tacoma, WA (152) |
| 94. Burlington-Montpelier, VT (28) | 142. Albany, NY (91) | 190. Terre Haute, IN (162) |
| 95. Albuquerque, NM (60) | 143. Wichita, KS (68) | 191. Wichita Falls, TX (176) |
| 96. Allentown, PA (148) | 144. Charleston, WV (167) | 192. Wheeling, WV (190) |

#2
WASHINGTON, D.C.

#6
ATLANTA

there's the added incentive of state-funded employment training at the colleges and universities."

Even Birmingham, Ala., #73, whose fortunes once followed the steel industry's, has learned the education lesson. "The University of Alabama at Birmingham is now the city's largest employer," points out Lisa Roberts of the city's economic-development office. "And its medical research has led to

1. Las Vegas, Nev.
2. Orlando, Fla.
3. Charleston, S.C.

Source: Cognetics Inc., Cambridge, Mass.



spin-offs such as the Southern Research Institute." It has also made the city an attractive location for such companies as Nidek Medical Products Inc., a growing \$3-million manufacturer of oxygen concentrators for home health care. "We use the Southern Research Institute's testing facilities for our new health-care ideas to see if they would be sound products," says Nidek president Anand Chitlangia. (continued)



Gambling makes the desert bloom—and so do a host of new businesses

#1 LAS VEGAS

Poor Dennis Stein. Anywhere else he'd be a hero for his role in attracting 56 new companies with roughly 2,000 new jobs in a single year. In Las Vegas, though, Stein's Nevada Development Authority operates in a shadow. On the Strip, Golden Nugget Corp. builds The Mirage, a 3,000-room hotel-casino with volcano and tropical rain forest, adding 6,000 jobs to the market in a single month. Circus Circus's 4,000-room Excalibur hotel-casino will employ 5,600 when it opens, probably in June. "It's hard to compete with that," complains Gerald Sandstrom, who works for Stein.

Gambling is to Las Vegas as government is to Washington, D.C.: whatever secret pride they feel, most people living in either place say that their town really isn't so different. "It's not the glitter gulch that everyone thinks it is," insists Nevada governor Bob Miller. "You see people down on the Strip acting strange? Those are the visitors, not the residents." Says Ken Hix, a Colorado contractor who came to town to start Mirimar Systems Inc., a company that assembles and sells lightweight architectural mirrors: "Once you get away from the Strip, this is just like any other town."

Not exactly *any* other town. Top-ranked Las Vegas—and surrounding Clark County—is exploding. Every month between 3,000 and 5,000 people move there. Big companies such as Levi Strauss and T. J. Maxx are establishing distribution centers in Clark County, so they can service the West Coast without paying West Coast prices for land, construction, and help. Following the same theory, Peachtree Doors Inc. has set up manufacturing and assembly

operations there, while Ocean Spray Cranberry is planning on doing so. Citibank and Montgomery Ward Credit Corp., among others, have located financial service centers in Vegas to tap a labor force that has had lots of practice counting. And small companies such as Hix's are proliferating.

People concerned about the city's image—officials, developers, and economic-development specialists—complain about its reputation. "Quality of life is a hard sell here," says Nevada Development Authority vice-president Bill Kellar, "because people look at us through the veil of gaming." Without gaming, though, the same people concede that Las Vegas would be just one more southwestern city on a run of good luck. Gambling distinguishes Las Vegas from Phoenix and Denver, whose streaks have petered out. And gambling still accounts for more than 25% of the city's jobs, a proportion that's holding steady despite the growth in other kinds of work. "We've got an industry with virtually no competition," says John Goolsby, president of Summa Corp., a developer.

The business and government elite of Las Vegas gathered in a ballroom near the foot of The Mirage's volcano last December to hear about the prospects for 1990. The forecast, not surprisingly, was for more of the same: growth. The bad news came from Ralph Piercy, managing partner at the accounting firm of Lavenoth & Horwath. "Gaming will still overshadow all that diversification we heard about this morning," he said. "We'll still be known as a one-industry town."

Poor Dennis Stein.

—Tom Richman

Finally, there's a new twist emerging on the old model of the one-industry town. In the past, when you thought of Akron's tires or Pittsburgh's steel, the names of a few big companies came to mind. The cities prospered or declined with the prospects of a couple of corporations. Today, cities are developing industrial specialties without depending on two or three giant employers.

The classic case is California's Silicon Valley. Large employers such as Apple Computer Inc. and Intel Corp. have, like most big companies, been bounced around by the vagaries of the high-tech marketplace. But the San Jose metropolitan area remains near the top of our list because it's still an unparalleled incubator for smaller technology companies. You can see a similar phenomenon, albeit on a more modest scale, in cities as far

away as Sioux Falls, S. Dak., and Charlotte, N.C. Sioux Falls (#20) claims to have more retail space per capita than any other city in America. Its 93-acre Empire Mall already includes 180 stores, and more are on the way, along with a \$3-million expansion of the nearby Encore Hotel, designed to accommodate overnight shoppers. Charlotte's booming growth (#11 on this year's list, up from #29 a year ago) can be traced to its emer-

gence as a banking center and a hub for product distribution, with many different companies in each industry.

As for Milwaukee, its sorry ranking (#156) on this year's metro list reflects above all a slow rate of net employment growth—and it's true that the city hasn't yet come back from the decline of heavy-industry giants such as Allis-Chalmers. However, Milwaukee neither looks nor feels like an economic basket case. The old Schlitz brewery, abandoned when The Stroh Brewery Co. bought out the beer that once made Milwaukee famous, is now a thriving office complex. Out in suburban Waukesha County—the localization of growth, again—companies are proliferating so fast there's a chronic labor shortage (see "The Economic Microscope," November 1989). Even the industrial suburb

1. Atlantic City, N.J.
2. Las Vegas, Nev.
3. Fort Pierce, Fla.

Source: U.S. BLS and Woods & Poole Economics, Washington, D.C.





Even after Hurricane Hugo, a booming economy with antebellum allure

#7 CHARLESTON, S.C.

This three-century-old city came back from the war of 1861 and from the earthquake of 1886. No doubt Charleston will also recover from the hurricane of 1989.

Indeed, hardly had Hugo departed than out-of-town investors were betting that the region's pre-storm economic gains hadn't gone with the wind: four-term mayor Joseph P. Riley Jr. was breaking ground for a new \$18-million hotel, even as nearby crews noisily hammered roofs back onto ravaged offices and stores. "Charleston," savored one of the participating hoteliers, "is New Orleans without the sleaze—and you can get higher room rates."

Charleston has maintained its antebellum allure despite a fast-paced industrial revival. Today, tourism is the city's biggest private employer, outranked only by the U.S. military. City leaders managed to keep their history intact not so much through foresight as through default: for decades host to navy-base commerce (read, red-light district), Charleston had neither the funds nor the motivation to sacrifice vintage structures to high rises. The old edifices, now in the process of being revived, were spared expansionist extinction.

Not to put the knock on the North, but Charleston's palm-treed quality of life, in which you can fish, sail, and/or play golf year round, is a major selling point. True, that's an attraction of San Diego and Miami—except in this long-neglected region a businessperson can buy the same house for \$180,000 that would cost five times as much in most other enterprise-hungry places. Thus the following tactic:

cash out plant and home from Long Island or similarly top-valued place, set up around Charleston, and pocket millions of instant cash in the rollover. There's plenty of affordable space, a pool of right-to-work labor, and financial incentives galore.

Not that all the Trident region's gains have been another region's loss: many businesses are expanding into the area without giving up their home base. Gerry and Ron Weil own Swiss American Importing Co., a St. Louis company that has opened an 18-employee satellite operation in Charleston. The company's imported cheeses used to be trucked from New York City; now, they arrive through the deep-water Port of Charleston's three huge container facilities, bustling evidence of the region's well-managed growth. LG Industries, a paper-machinery company that will employ 30 people, is expanding its operations into the Charleston countryside (but still close to the airport) to take advantage of the enhanced tax breaks granted to rural enterprise.

In a homebred variation on economic development, Johnson & Wales University at Charleston—a branch of the Providence-based college—got its start in the small-business incubator that Control Data Corp. runs in the city. J&W U is an accredited institution that grants two-year associate degrees in culinary arts—and whose graduates spill out into the area and open fine restaurants, which attract rich tourists, who spend lots of money in the shops, which order truckloads of merchandise, which encourages manufacturers. . . .

You get the idea. Charleston wasn't blown away by Hugo. —Robert A. Mamis

of West Allis isn't doing so bad. Although it lost more than 8,000 jobs from Allis-Chalmers and other big manufacturers in the 1980s, it gained several thousand other jobs, mainly from newer and smaller companies. Watch for the Milwaukee region to climb on future metro rankings.

The lesson? Economic growth is where you find it. But you can find it, these days, in many different places—and for many different reasons. □

Research assistance was provided by Lisa D. Royal.

HOW THE CITIES WERE RANKED

Our fourth annual report on metropolitan areas is based on three factors: job generation, rate of significant new business start-ups, and the percentage of young companies enjoying high growth rates. For each factor, each metropolitan area was assigned a score from 1 to 33.33, reflecting its relative standing among cities in the United States. The overall rank of a city was based on the sum of the three scores.

Metropolitan areas were defined as counties or groups of counties closely related by commuting patterns. In general, a densely settled suburban community was grouped with an urban county if 15% of its residents reported working in the city. To be considered a metropolitan area, each county or group of counties must have at least 100,000 jobs or 200,000 people.

This year, to make our report more accurately reflect current conditions, we changed the period of time covered. So the data reflect the change from January 1987 to July 1989, a two-and-one-half-year period, rather than the four and a half years in previous reports.

The rate of significant business births was derived by dividing the total number of enterprises in an area into the number founded since January 1987 that had 10 or more employees by July 1989. The number of high-growth companies was figured as a percentage of all companies founded between January 1981 and January 1985. For each company, an index was calculated by multiplying its absolute growth in employment between January 1987 and July 1989 by its percentage of employment growth. Companies with an index of 20 or higher were classified as high growth. Employment figures measure the change in private nonagricultural and civilian public-sector employment between January 1987 and July 1989.

Data on companies were compiled by Cognetics Inc., a Cambridge, Mass., consulting firm. Job data were supplied by the U.S. Bureau of Labor Statistics and Woods & Poole Economics Inc., a research firm in Washington, D.C.

The ranking was prepared by special projects editor Sara Baer-Sinnot. For a complete listing of all rankings or for information on reprints, please call (800) 372-0018, ext. 3420.



HERE COMES THE NEIGHBORHOOD

Some of America's fastest growth occurs within our slowest-growing cities

BY DAVID L. BIRCH

Sometimes—so it seems—INC.'s annual ranking of metropolitan hot spots can get pretty boring. Aren't the same areas always near the top of the list? Such cities as Orlando, Atlanta, and Anaheim ranked high last year, rank high this year, and will probably rank high again next year. Chicago, Cleveland, and New York City, similarly, are always lost in the list's bottom half. Ho hum.

But before you fall asleep, ponder a couple of questions: why does Pittsburgh have more rapidly growing companies than Tampa? Why does Detroit have more than Dallas, and St. Louis as many as San Diego?

A moment's reflection will persuade you of a simple but often-ignored truth. The perennially top-ranked cities are up there not because they are better but because they are newer.

Different metro areas have matured at different points in our history. Cities in the Northeast began taking shape before the Industrial Revolution. Rustbelt regions boomed in the nineteenth and early twentieth centuries. Walk around some of the decaying industrial sections of Baltimore or Buffalo. These areas still house a lot of industrial and commercial baggage—older companies, many of them stagnant or declining. That hurts their averages.

The newer areas have come to maturity just since the end of World War II. (Only 167,000 people lived in Phoenix in 1946, for example, as compared with 2.2 million today.) As a result, they inherited little of

this baggage. They house relatively few older *Fortune* 500 factories; they've scarcely been touched by the 3.5 million jobs eliminated by the 500 since 1980. When it comes to averages, the new cities have lots of ups and very few downs. No wonder they score high.

But the mixed-bag economy in the older cities has already produced a strong counterforce: a legion of talented, energetic men and women who have benefited, so to speak, from the experience of the past 100 years. No longer enamored with life in the large corporation, they are seeing niches the giants can't touch. They're developing technologies that are economical on a small, entrepreneurial scale. And as INC. readers well know, they're creating a host of fast-growing companies. Maybe the *Fortune* 500 eliminated millions of jobs in the past decade—but more than two-thirds of those losses have been replaced by smaller companies *within* the manufacturing sector.

Geographically, this new breed is settling in neighborhoods somewhat different from the haunts of their old-economy ancestors. Some are building their businesses out on the far fringes of the metropolitan area, often near an airport or a new highway. Look up Chesterfield, Mo., on a map and you'll find that it's quite some

BOOM NEIGHBORHOODS

High-growth regions in and around older cities (selected)



1. Melville-Smithtown, N.Y.
2. Elk Grove Village-Arlington Heights, Ill.
3. Bothago-Farmingdale, N.Y.
4. West Chester-Wayne, Pa.
5. Des Plaines-Northbrook, Ill.
6. Livonia-Plymouth, Mich.
7. Edison-Woodbridge, N.J.
8. Pittsburgh central business district
9. St. Louis-Chesterfield, Mo.

Source: Cognetics Inc.



distance from St. Louis. Others are recapturing run-down industrial districts, such as East Cambridge, Mass. (see "The Most Entrepreneurial Place on Earth," page 60). A third group—like the new service businesses sprouting up in midtown Manhattan, Chicago's East Loop, or Pittsburgh's central business district—are squeezing themselves in amidst the high-rise headquarters of much larger companies.

What these entrepreneurs have created is a new set of boom areas in older cities. You won't find them in the rankings on pages 42 and 43, because INC.'s annual listing focuses only on metropolitan areas as a whole. But they're every bit as vital as Las Vegas or San Jose.

To get a better handle on this phenomenon, my colleagues at Cognetics and I created a new business geography, breaking the United States up into nearly 1,300 "metropolitan neighborhoods." New York or Los Angeles contains 50 or 60 of these subareas. Smaller cities might contain 15 or 20. The areas are designed to isolate different kinds of economic activity, and to distinguish between growth and decline.

The chart on page 52 lists several of the fastest-growing neighborhoods in older cities, chosen from the top 25 (ranked by number of high-growth companies). Just below the top 25—but still in the top 10% of all metro neighborhoods—are sections of Kansas City, Cleveland, Milwaukee, and Cincinnati. In fact, when you print out a list of that overall top 10%, you find that exactly half are in older cities.

What kind of businesses are found in places like Melville, N.Y., Northbrook, Ill., and Livonia, Mich.? They are companies such as The Softa Group, 25 miles north of Chicago in Northbrook. Softa—#497 on last year's INC. 500 and still growing at 40% a year—makes and distributes software for real-estate developers, managers, and investors. "Northbrook is a neighborhood where there's



A town near Houston comes back fast from the oil crash

Here Comes the Neighborhood: THE WOODLANDS, TEX.

During the gluttonous, heady years of the oil frenzy, Houston didn't give much thought to anything as academic as economic development. Energy-related business poured into the city; entrepreneurship didn't have to be enticed. "In those days," says John Bröck, head of the five-year-old Houston Economic Development Council, "economic development" consisted of sending out a city map.

No more. As oil prices plummeted in the 1980s, Houston went through a massive depression, losing 220,000 jobs. Yet in spite of the drop—many would argue because of it—the city is rebounding with astounding vigor. More than 125,000 jobs have been added back in the past three years. Some 300 new companies open each month. "The success you're seeing," says Bröck, "comes simply because people were desperate."

Ringling Houston, in fact, is a 20- to 30-mile radius of communities bursting with new activity. Consider The Woodlands, 30 miles north of Houston center, developed in the 1970s as a place where people would live, work, and play. The Woodlands is capitalizing on a growing regional infrastructure to encourage high-tech companies—an infrastructure that's emerged from what one Houston official calls a "united recognition of our deficiencies." Among its components:

- BCM Technologies, a wholly owned but separately managed subsidiary of Baylor College of Medicine. BCM identifies research that has commercial possibilities and offers management help to start-ups;

- Free or almost free help from the public Small Business Development Center—tracking down technical assistance, arranging advisory boards, finding government con-

tracts through a matchmaking program;

- Tax-incentive programs (notably to keep \$2-billion Compaq Computer Corp.'s expansion in the region) and a capital-raising service spurred by the one-year-old private Greater Houston Partnership;

- Homegrown venture capital from Woodlands Venture Partners, which works with BCM and the partnership in funding biomedical start-ups.

Some 12 companies and six research institu-

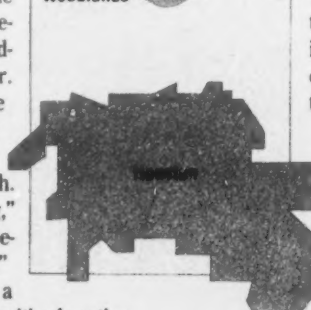
tions now inhabit what's called Research Forest in The Woodlands, an area that officials hope will turn into the next Silicon Valley or Route 128. And while Martin Sutter, managing partner of Woodlands Venture, concedes that the economic impact of the biotech industry isn't yet colossal—indeed, about 60% of Greater Houston's jobs are still oil-related—he says the groundwork

is being laid. "If a new pharmaceutical company becomes successful, it will be big. If we have one, much less two companies like that, you'll be seeing manufacturing facilities and new employees not unlike the petrochemical companies that now line the channel."

Everything that's coming together, he says, is a natural. "Most communities talk about creating something out of nothing. But here we had the structure with the universities. It's just that, for years, nobody took a role in capitalizing on that." Adds Phil Ralston, CEO of Optex Biomedical Inc., a company spun out from Texas A&M and now operating in the heart of The Woodlands: "This is a community that really does work. A little bit of paradise in this part of Texas."

—Leslie Brokaw

The Woodlands





still room to grow," says Larry Zinox, a principal with the company.

In general, fast-growing businesses in these new boom neighborhoods are small. According to Cognetics's data, 70% have fewer than 20 employees and 93% fewer than 100. The majority are locally owned. And they're highly diverse. About 20% are in business and professional services, with another 16% in general manufacturing. High-tech manufacturing accounts for only 2% of the companies.

Most important from an international point of view, companies in these high-growth neighborhoods are competing successfully abroad. Nearly 5,500 are exporters. And surprisingly, most of the companies that ship their goods or services overseas are themselves quite small: about 85% have fewer than 100 employees. Examples? Galison Books, an INC. 500 company in midtown Manhattan with four full-time and six part-time employees, sells its address books and other products in France, Italy, England, Japan, Canada, Australia, and New Zealand. Qosina Corp., a Melville, N.Y., manufacturer of medical and cosmetics disposables, also has only four full-time employees—but sells to England, Germany, and the Netherlands.

You can, if you want to, compare Orlando with Pittsburgh, or Anaheim with Chicago. And you'll find, year after year, that the newer Sunbelt cities score higher on the entrepreneurial averages than the older cities. But when you put the economic microscope on the older cities—looking at neighborhoods and regions *within* the metro area—you find at least as much growth and vitality there as in the high-ranking regions.

As with so many things in life, it pays to look below the surface. □

*David L. Birch is president of Cognetics Inc., in Cambridge, Mass.
Research assistance was provided by Lisa D. Royal.*



Still-booming real estate outside New York City

Here Comes the Neighborhood: MONMOUTH COUNTY, N.J.

My hometown? In the metro rankings? As the horse thief said when they were about to run him out of town: if it weren't for the honor of the thing, I'd just as soon not be involved.

OK, so the Holmdel-Red Bank-Eatontown region of central New Jersey is booming, even though the rest of metropolitan New York City is sluggish. But do we really have to tell everybody? Periodically, it seems, we get discovered, and when we do people come to look, and some of those visitors then have the bad grace to move in. "You get all these New Yorkers who go out for a Sunday drive and think they've discovered heaven," says Bob McIntosh, owner of Empress Travel in Middletown, the municipality separating Holmdel from Red Bank. "They're close to New York yet still in the country."

Close? My daily commute to Manhattan runs an hour and 45 minutes each way. Maybe that's why so many people have chosen to work where they live. Bell Labs started it all: the research arm of AT&T has been here since the 1960s. Prudential has a sprawling campus-like office complex in town (don't tell them we use their softball field on Sundays), and Chase Manhattan has taken an option on another huge chunk of land.

And it's not just the big boys who like the area. Leonard P. Cuozzo, who grew up in Keyport, just east of Holmdel, has decided to stay. Cuozzo runs fragrance manufacturer Paul Sebastian, number #228 on the 1989 INC. 500, down in Ocean Township, which is adjacent to Eatontown. Says Cuozzo: "We just don't have to be in the city. We don't even have an office there. We can do a lot of

our business by phone, fax, and overnight mail." Customers? Cuozzo sends sales reps out to department stores, and sees buyers from men's specialty stores at trade shows. No downtown location necessary.

Where businesses go, support services follow. So it's not surprising that East Coast Computer Systems, a business-to-business marketer ranking #110 on the 500, is here as well. "While we have sales up and down the East Coast, most of our business is here,"

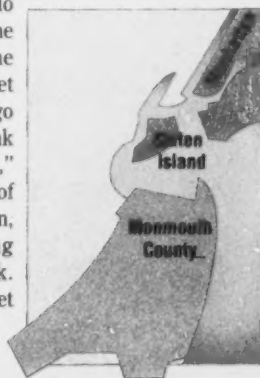
says company president Marbeth J. Shay, who, like me, happens to live in Holmdel. "There's absolutely no reason to go anywhere else." With all this activity, retailers are tripping over one another to set up shop here—and that's another reason I hope we'll keep the whole thing quiet. Consider our newest shopping area: The Grove at Shrewsbury, about halfway between Holmdel and Eatontown. It's like a caricature of yuppie shopping habits.

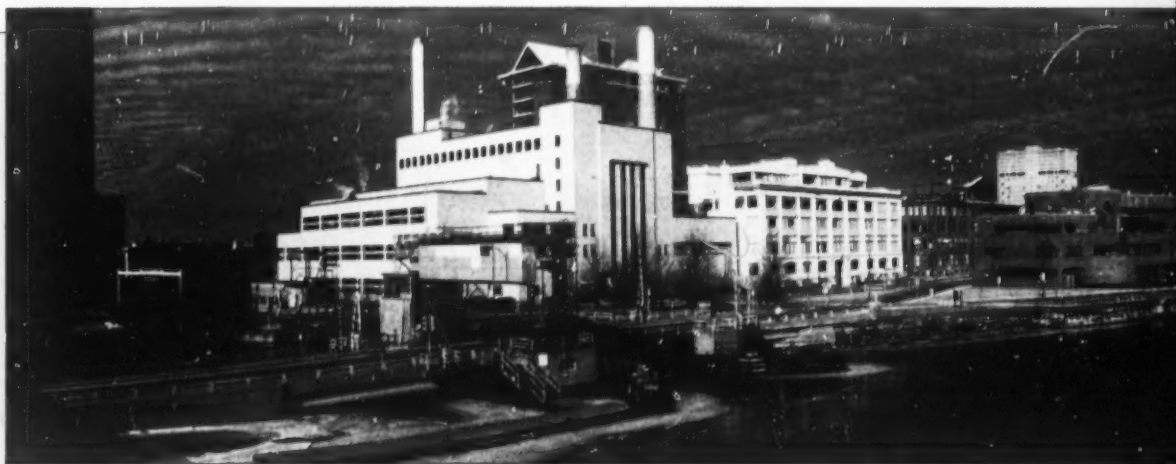
Among the 30 stores: The Gap, Gap Kids, Williams-Sonoma, Eddie Bauer, and Workbench. Banana Republic is opening soon.

Prosperity isn't all bad, of course. Those of us who were able to buy in the early or mid-1980s have seen the price of our homes—which we thought were overpriced then—more than double. Still, I wish we could go back to the way things were a few years ago. We now have \$750,000 homes going up on lots where you can look into your neighbor's yard. There's a 2,174-name waiting list at the train station for a parking space. And believe it or not, we are beginning to have traffic jams—especially on Sundays when New Yorkers are out for a drive.

Is it too late to take us off the list?

—Paul B. Brown





'THE MOST ENTREPRENEURIAL PLACE ON EARTH'

What it's like to build a business in East Cambridge, Mass.

BY LIZ ROMAN GALIÈSE

I think you get hooked on the adrenaline. And terror is part of what makes the adrenaline flow."

The speaker is C. David Seuss, chief executive officer of Spinnaker Software Corp., a producer of inexpensive office and education programs for personal computers. Adrenaline? Terror? Founded in 1982, Spinnaker blossomed through 1984, contracted by more than half, expanded again this year. All of which is normal for any ambitious fledgling except for one factor: the company is based in East Cambridge, Mass., a tiny neighborhood that is perhaps the most entrepreneurial place on earth. And that, say the people who build businesses there, makes the highs higher—and the lows more devastating.

Bordered by the Massachusetts Institute of Technology, just across the Charles River from Boston, East Cambridge covers less than a square mile. A decade ago it was a wasteland, its streets crowded with gargantuan old factories, some still reeking of the soap once manufactured there. The industrial canal on the neighborhood's northwest corner was a storage area for highway salt.

Today those same streets are brushed clean and lined with sidewalk cafés and trendy shops, many of them renovated to look smartly old-fashioned; the canal has become a focal point for a polished new office-and-condo development. But the change may be even more dramatic behind the facades.

■ Roughly 10% of Massachusetts's software companies make their home in East Cambridge. Nearly one-quarter of the state's 140 biotechnology companies do too. In all, says David L. Birch of Cognetics Inc., some 17,000 new jobs have been created in East Cambridge over the past eight years.

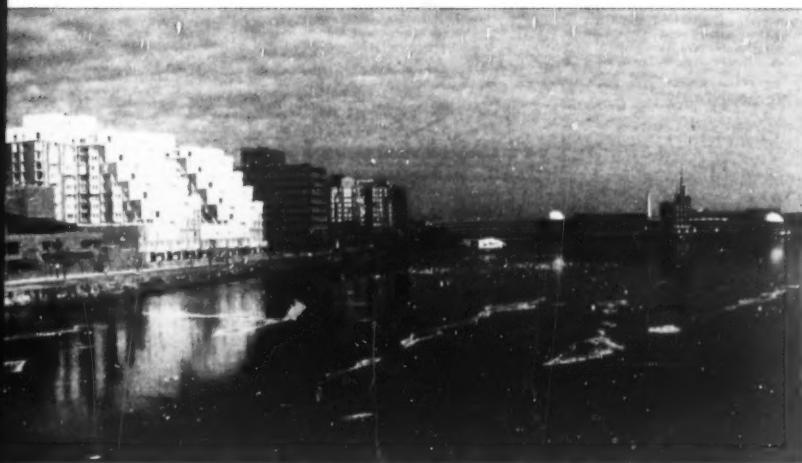
■ Roughly 3.5 million square feet of new office space have been added to a base of 2.2 million square feet over that same eight-year period, according to the real-estate firm of Spaulding & Slye. Metropolitan Boston may be suffering from cutbacks in the defense and computer industries. East Cambridge has scarcely noticed.

■ At the American Twine Office Park, in the middle of East Cambridge, developers had expected to lure law firms attracted by the nearby courthouse and big companies desperate for presentable office space. What they got instead were tiny businesses such as Inscribe Inc. (which computerized Ronald Reagan's signature) and Funk Software Inc. (which turned the unwieldy Lotus 1-2-3 spreadsheet right side up).

"The building wasn't intended to be a high-tech incubator," says Mitchell Roberts, marketing and leasing manager for the developers. "That came as a surprise." Some 50 to 60 young companies have been based at American Twine since it opened in 1983.

And what is it like for an entrepreneur to do business in a place so jam-packed with compatriots? At Spinnaker, what Seuss calls the adrenaline and the terror coexist with more pedestrian factors. Spinnaker's proximity to MIT makes it easy to recruit programmers, and to take advantage of the pool of students seeking part-time work. The company has also been able to expand and contract without difficulty; with so many fast-growing companies looking for space, says Seuss, you can sublet yours when you're on a downward spiral and rent someone else's when you begin growing again.

Then there's the onslaught of professional-service firms: Big Eight accountants; slick public-relations outfits; tony consultants like Alliance Consulting Group, spun off from Boston Consulting



Once an industrial wasteland, now a high-tech incubator



Group—even a day-care center, Bright Horizons. All offer help, albeit at a price. “That phone will ring, and you’ll have no idea what question will come over the line,” says Joseph S. Tibbetts Jr., the Price Waterhouse partner who founded the firm’s Entrepreneurial Service Center three years ago. “A guy will say, ‘I want to fire my chief financial officer—how do I do it?’” Robert Johnson, a venture capitalist, launched Founders Capital Partners two years ago to bridge the gap between good idea and start-up; he helps entrepreneurial hopefuls get their acts together. “East Cambridge is sort of a primordial soup,” he says. “You have to be down in the weeds to catch something new.”

The company that stands as a symbol of all this—a focus of envy as much as of admiration—is Lotus Development Corp., which in 1981 had but three employees. Two years later, when it shipped the software package that changed the way American business did its numbers, Lotus became the ultimate all-American success story. “You know, tremendously quick success, with a really good product,” says Janet Axelrod, the company’s first hired employee.

Axelrod was in part responsible for bringing the company, now a nearly \$500-million giant, to East Cambridge. Having shipped the pathbreaking 1-2-3 program from its old headquarters on the city’s west side, Lotus had to grow more rapidly than expected. So Axelrod found a decaying glue factory on First Street in East Cambridge.

That decision, along with the closeness of MIT, has made the area what it is today. Lotus’s eight East Cambridge locations constitute a campus of sorts, connected by a line of ubiquitous white vans with the company’s name prominently displayed on their sides. And Lotus, some say, provides the inspiration for the area’s other entrepreneurs. “You can’t look up to IBM and say, ‘I’m going to get there some day,’” says Nubar B. Afeyan, 27, founder and executive vice-president of Perceptive Biosystems Inc. “But Lotus—that isn’t so far away.” Indirectly, Lotus even symbolizes the downside of entrepreneurship: founder Mitchell Kapor left Lotus in 1986 for another start-up, this one called ON Technology. And since ON hasn’t yet lived up to expectations, Kapor is now in the same maybe-we-won’t-make-it boat as everyone else.

Indeed, failure may be the real terror of doing business in an environment so crammed with hopefuls. At The Office, a facility where the newest entrepreneurs can rent a room or two with a desk

and phone, 25% of the tenants don’t survive. Neither do a lot of better-established companies. When Afeyan moved into new quarters on the edge of East Cambridge, the first thing he stumbled on were the business cards of the former tenant, a company that had gone under. For Charles Digate, a former Lotus senior vice-president now launching a software company called Beyond Inc., seeing the tenant across the hall fold was a moment of truth. “I was happy when they took the name off the door,” he says, unwilling to see so flagrant a reminder of failure.

Excitement and fear—adrenaline and terror—exist in uneasy symbiosis. At the headquarters of booming Interleaf Inc., CEO David Boucher points admiringly to the spiral staircase winding like a spine through the center of the facility. The building, Boucher explains, “fosters a sense of oneness—that we’re all in this together.” Other entrepreneurs in the area echo Boucher’s sentiments. Asked about doing business in such an environment, they talk about the easy flow of ideas from campus to company, about the sharing of ideas and facilities among start-ups, even those in the same industry.

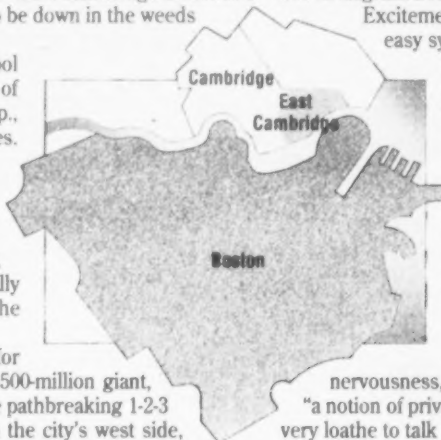
But the ever-present specter of failure appears to have produced exactly the opposite effect: a nervousness, a recoiling from one another. Digate, in fact, says “a notion of privacy” is really what pervades the area. “People are very loathe to talk about what they are doing. I think that’s part of the [East Cambridge] mystique. People know there’s so much going on, and they don’t know what it is. There’s this underlying anticipation that some day, somebody will come up with something brand-new.”

As East Cambridge matures, many believe that rising rents will put an end to the freewheeling entrepreneurial culture. But as Spinnaker’s Seuss says, more than a few company founders may already be hooked. Late last spring I talked with The Saddlebrook Corp.’s founder, Mike Kinkead, in his spectacular office, the Charles River a sparkling ribbon of blue under the Boston skyline. At the end of June Kinkead was out, fired by the company’s venture capitalists. A month later the business itself was padlocked.

Launching a new company right away, Kinkead found space fast in suburban Wellesley. But he dreams of finding space in the environment he knows best.

“There’s real magic in East Cambridge,” says Kinkead. □

Liz Roman Gallese is a free-lance writer based in Wellesley, Mass.



HANDS ON

A Manager's Notebook

EDUCATION

DO YOU VALUE SEMINARS?

Days of attendance reported in 1989:

	None	1-3	4-6	7-10	10+
Manufacturing/Construction	8%	30%	41%	17%	4%
Banking/Finance	4%	32%	26%	29%	9%
Insurance	5%	44%	22%	22%	7%
Service	5%	26%	42%	16%	11%
Retail/Wholesale	0%	35%	38%	27%	0%
Utilities/Transportation/Communications	6%	47%	9%	19%	19%

Source: 1990 AMBA Business Expenses Survey of 278 executives by the Administrative Management Society Foundation, Denver, Pa., 1989

TRAINING

THE SHOP FLOOR

What's the best way to break in a new executive? Put him to work on the shop floor. If you ask Henry Nasella, he'll tell you few experiences can match it for letting a manager see the company's problems firsthand.

Nasella had been a supermarket executive for two decades when he became president of Staples Inc., a \$200-million chain of 40 discount office-supply stores with headquarters in Newton, Mass. He knew nothing about the office-supply business, so he spent a couple of weeks of his first month on the floor of one store, unloading delivery trucks, stocking shelves, and working the cash registers.

"I got a good handle on what we did well and didn't do well," says Nasella. "The things we didn't do well came through loud and clear."

When he took over operating responsibility a week later, Nasella was up to speed on how the business worked—a process, he says, that would have taken many months if he had stayed in the office. □

EMPLOYEE RELATIONS

DO THE RIGHT THING

The birth of Bread Loaf Construction Co.'s Employee of the Month program was certainly inauspicious. Leo Breshnahan, a field worker, had approached executive vice-president John Leehman at the company's annual meeting for its 160 employees and complained: "We do all the work out in the field, while people in the office are just having a good time."

Leehman invited Breshnahan to spend the day seeing how the office crew earns a living. "It was a real turning point for Breshnahan," says Leehman.

"He knows where he can go in the system, and so do other employees who have followed in his footsteps."

Now, every month an employee is chosen to tour Bread Loaf's offices and construction sites to get a sense of just what other people do in the corporation.

What's more, spending a day with the star employee gives managers of the Middlebury, Vt., business a chance to get acquainted with the best management candidates in the company. □

BANKING

MAXING OUT

Michael Regan, president of Tranzact Systems, a Chicago-area freight payments service, couldn't figure out why his application for a modest small-business loan kept getting turned down. Then a venture capitalist told him, "Mike, processing a \$250,000 credit line and a \$750,000 long-term note costs as much as a loan for twice that. Why not make it worth the bank's while?" So, Regan rewrote his application and presto! It was approved.

"If your cash flow can justify it," advises Regan, "make the bank a profitable offer." □

MEETINGS

DRY RUN

Mike Allred, CEO and president of Visual Information Technologies Inc., a Dallas graphics-imaging company, wanted to stop employee gossip about his monthly board meetings, so he decided to hold dry runs of the meetings with his staff of 90.

"It goes over like gangbusters," says Allred. "Delivering the same spiel we give the board shows we respect employees' participation." Employees ask tough questions, which gears management up for the real McCoy the next day. □

INTERNATIONAL CULTURAL DIFFERENCES

What sales skills do your sales representatives lack?

	United Kingdom	France	West Germany	Switzerland
Understanding client needs	53%	12%	52%	56%
Listening skills	27%	10%	20%	21%
Persistence/patience/tact	16%	18%	23%	19%

Source: Survey of 1,157 executives in Europe conducted by National Opinion Research Ltd. for Learning International, Stamford, Conn., 1989

HANDS ON

COMMUNICATIONS

WHAT IS IT THAT YOU DO?

Cross-training is a time-tested method of preparing employees to do more than one job. But Jim Baka, president of CERAC, a specialty chemical manufacturer in Milwaukee, uses it to communicate.

"Several years ago, we started involving production managers in day-to-day sales and marketing decisions by having them sit in on meetings. We also sent them to trade shows. Our goal was to make sure they understood the way the work they do fits into our complete business operation and long-term goals," says Baka.

Baka doesn't think it's too

costly to teach employees skills they won't be using over the long term. "If I send my production plant manager to a two-day trade show, he'll come away understanding more about our customers and the need for meeting quality and scheduling goals than he could ever learn from me just talking at him."

Bottom-line results at the 120-employee company support Baka's theories: "Thanks to cross-training, we've been able to push sales up 15% to 20% per year, while maintaining a high quality of product, delivery performance, and technical customer assistance." □

COMPENSATION

KEEPING THEM DOWN ON THE FARM

How do you keep your best salespeople from leaving to work for somebody else? Or get an independent rep to pay more attention to your line?

The answer, says Jeffrey S. Adler, is "silver handcuffs"—a deferred bonus plan. Adler, a vice-president of the Insurance Services Division of Mesirow Financial, a Chicago-based financial services firm, explains how it could work:

You set a specific goal this

year for your salesperson, who is generating, say, \$100,000 in sales annually. You tell him for each year his sales top \$110,000, he'll get a bonus of \$2,500—but the bonus is only payable after he has stayed with the firm seven years. If the salesperson hits his quota each year during that time, the company will pay out a \$17,500 bonus in 1997. If the rep leaves before that, the company would keep the money. □

MANAGING PEOPLE

MONEY IS NO OBJECT

Lou Pearlman, founder and CEO of Airship International Ltd., in New York City, had a problem. Eight of his company's 42 employees were living on the road eight months out of each year to operate the two blimps the company leases. And they were growing weary.

Pearlman offered them raises and bonuses, but family, not income, was the issue. So he proposed spending any raises and

bonuses normally incurred over the next two years on extra personnel, so employees' travel time would be cut in half. The managers agreed to a 20-month salary freeze, which Pearlman estimates paid for the cost of hiring the new managers.

"Knowing they can get back to a normal, day-to-day life," says Pearlman, "everyone is more eager to do the things they set out to do." □

WORKPLACE ISSUES

SENSITIVE AREAS

Rated as a serious hazard by:

TOP
EXECUTIVES

EYESTRAIN

OFFICE
WORKERS

36%



44%

QUALITY OF AIR

32%



27%

RADIATION FROM VDTs

22%



27%

EXPOSURE TO AIDS

22%

AIDS

10%

EXPOSURE TO HAZARDOUS MATERIALS (ASBESTOS, ETC.)

17%



12%

Source: From the "Office Environment Index" survey of 1,041 office workers and 150 top executives, Steelcase Inc., Grand Rapids, 1989

CUSTOMER RELATIONS

CUSTOMER SATISFACTION

Your line employees could be some of the best salespeople you have. After all, who knows the product better than the folks who make it?

When J. W. Kisling, CEO of \$26-million Multiplex Co., in Ballwin, Mo., gives tours of the beverage dispenser manufacturing facility, he stops by a workstation and asks one of the company's 120 factory employees, "How about explaining to us

what you're working on?"

Why? "It impresses a customer to see our employees are able to explain what's going on around them. Everybody's a salesman here." It's difficult to measure how much business this tack brings in, but with customer comments like "These guys really know what they are doing," Kisling's sure it hasn't hurt revenues one iota. □

(HANDS ON continued)

HANDS ON

ENVIRONMENT

POPPED FRESH DAILY

Teresa Harrison faced a dilemma. She wanted to assure customers of SET Laboratories Inc. that its packages of software and manuals could be shipped undamaged. But she also wanted to be kind to the environment by not using polystyrene peanuts for packaging.

Her solution? Popcorn—which, it turns out, is not only an effective substitute for polystyrene but, aside from the investment of an air popper, costs about 60% less, even if you don't purchase the popcorn in bulk.

The only glitch in using popcorn is that the packaged goods must be enclosed in envelopes, or they will absorb the popcorn smell. Harrison, who founded SET Laboratories in Portland, Ore., three years ago, includes a note explaining the switch and pointing out that, while it is popped fresh daily, the packing material is not intended for human consumption. □

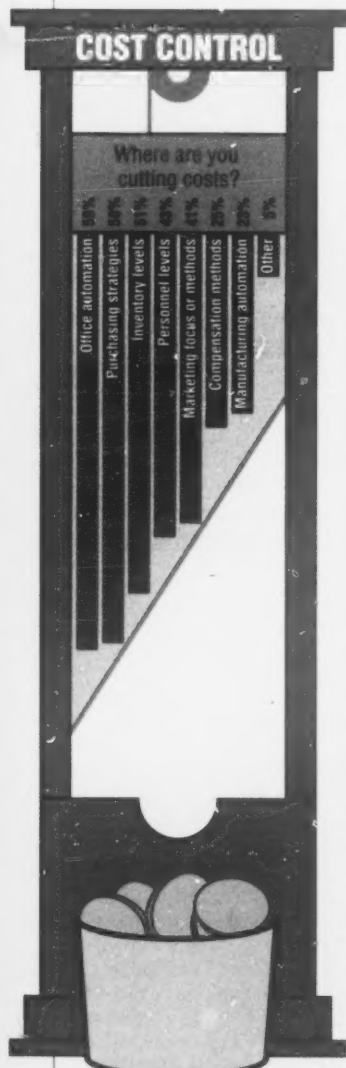
MARKETING

SPECIAL DELIVERY

The next time you mail a letter or package, Barry Fribush wants you to remember that postal workers are customers, too. From the time your local post office picks up your letter to the time it's delivered, many different employees will handle, sort, and bundle your letter. As long as all those people have to look at your envelope to figure out where it should go, Fribush reasons, why not try to sell them something?

Fribush, founder of Bubbling Bath Spa & Tub Works Inc., in Rockville, Md., does just that. On each envelope he mails you'll find this message: "Mr. Postman: Thank you for delivering this valuable letter from The Bubbling Bath . . . at the end of the day you should relax in a Jacuzzi"—which Bubbling Bath just happens to sell.

"We started doing this because I thought the idea was cute," says Fribush, "but we have sold a couple of spas to postmen." □



Source: "1989 Arthur Andersen Enterprise Survey" of more than 4,500 CEOs of companies with sales ranging from \$1 million to \$120 million, Chicago

ON THE CHEAP

WHEN CHEAPER VIDEO DISPLAYS ARE BETTER

By Cary Lu

Among the flashiest components bombarding buyers of IBM PCs or compatibles these days are color video graphics array (VGA) monitors and their supporting boards. But VGA doesn't come cheaply. A VGA board lists at \$250 to \$500 and even a fuzzy color monitor costs \$350; a good one runs more than \$600, list price. That's in addition to the computer. On some high-end computers, you have no alternative; VGA is built into the machine.

But for all reasonably priced computers, the cheapest display may well be the best. Hercules Computer Technology Inc.'s graphics standard, dating from the early days of the IBM PC, still competes well with the likes of VGA. Its image quality is decent (it has 720 by 348 pixels on screen, versus VGA's 640 by 480) and any competent monochrome monitor will always produce sharper images than any color monitor. Certainly the price is right: Hercules-compatible video cards sell for as little as \$50 and good monochrome monitors run \$80 to \$100. Virtually all MS-DOS business software is compatible with Hercules video, including the latest programs that run under Microsoft Windows. Only a few specialized graphic arts programs truly require color.

The only problem with Hercules video is that OS/2 and Presentation Manager, the new operating system from Microsoft and IBM, do not support Hercules monochrome video and may never support it. Right now this is a moot point, since few people use OS/2, partly because the software choices are limited and partly because the hardware necessary to run OS/2 is expensive.

If you never change to OS/2, you will save a lot of money with Hercules video. But even if you do switch, a Hercules video card cost so little that you can afford to buy it now and discard it later. In fact, in a year or two, you can leapfrog VGA, moving to an even better standard, such as Super VGA (800 by 600 pixels) or 8514 (1,024 by 768 pixels). □

MERGERS AND ACQUISITIONS

TRICKS OF THE TRADE

If you're looking to buy or sell a company, how can you screen prospective advisers? Jeff Scheinrock, formerly a senior partner with Arthur Young & Co. who specialized in mergers and acquisitions, suggests asking references for the names of deals that fell through. "If an adviser won't turn them over to you, you're better off looking elsewhere."

Says Scheinrock, who is president of Strolee Inc., a Woodland Hills, Calif., manufac-

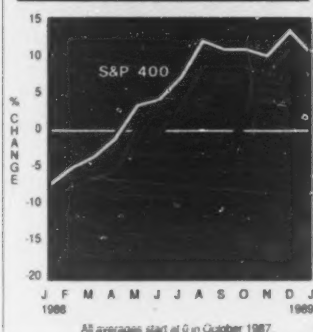
turer of baby products: "Seventy percent of deals fall through. If an adviser doesn't come through with a couple of deals that went sour, or acts as if he's only had successful deals, it's a signal that something's amiss."

"Deals don't go through for a variety of reasons, one of which could be the adviser," says Scheinrock. "You want someone who's secure enough to let you see both sides of their work." □

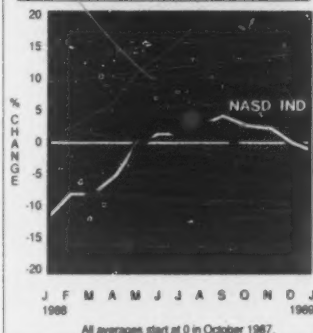
Reported by Teri Lammers, Paul B. Brown, Jill Fraser, Steven D. Solomon, and Tait Wardlaw

INVESTING IN GROWTH COMPANIES

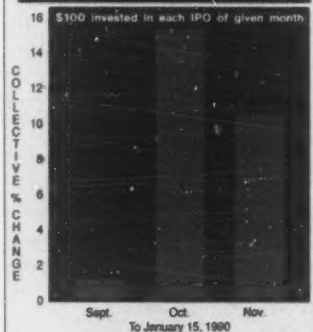
INC. vs. CONSERVATIVE AVERAGES



INC. vs. SPECULATIVE AVERAGES



IPOs IN THE AFTERMARKET



INITIAL PUBLIC OFFERINGS: DECEMBER 1989

O-T-C sym.	Company	Business/product	Offering		First aftermarket bid	Underwriter
			Size (\$ mil.)	Price		
ACRCA	American Capital & Research	Provides environmental services	30.7	8.50	8 1/2	Shearson
ARK*	Arkle Exploration	Produces natural gas	109	20.75	21 1/2	Morgan Stanley
BTZ*	Berlitz International	Provides language instruction	139	16.50	15 1/4	Goldman Sachs
BORL	Borland International	Mfrs. software	22.52	10.00	10	Goldman Sachs
CALLA	Cellular Information	Mfrs. cellular telephone systs.	30.4	10.75	10 1/4	Smith Barney
XUPS	Exide Electronics	Mfrs. power supply products	19.25	12.50	12 1/4	Alex. Brown
FBR*	First Brands	Mfrs. private-label consumer products	123	19.00	18 1/4	First Boston
GI*	Giant Industries	Produces oil	37.6	13.50	13 1/2	Shearson
GSBC	Great Southern S&L	Thrift institution	7.3	9.00	9	Merrill Lynch
GIII	G-III Apparel Group	Designs leather apparel	26	13.00	13 1/2	Oppenheimer
HNSI	Home Nutritional	Provides home infusion therapy	66	16.50	16 1/2	Smith Barney
KMCI	Keegan Management	Operates weight loss centers	8.75	7.00	9 1/4	H. J. Meyer
LRSII	Laser Recording Systems	Mfrs. optical disks	2	5.00*	5 1/4	Culverwell
MUSA	Martech USA	Provides pollution control eqts.	14	10.00	9 1/4	Paine Webber
MGG*	MGM Grand	Operates airline & casino	37.5	15.00	15	Bear Stearns
MFRI	Midwestco Filter Resources	Mfrs. air filter bags	5.64	8.00	7 1/4	Chicago Corp.
MIPS	MIPS Computer Systems	Supplies RISC technology for computer systs.	63	17.50	19	Morgan Stanley
NMA*	Nuveen Municipal Advantage	Closed-end fund	525	15.00	15	Alex. Brown
PWTC	Parametric Technology	Develops computer software	20.4	12.00	17 1/4	Alex. Brown
PDT*	Patriot Premium Dividend Fund II	Closed-end fund	156	12.00	12	Salomon Bros.
PLG*	PolyGram	Music production	512	16.00	16 1/4	Prudential-Bache
RHMO	Ramsey-HMO	Operates HMO	21.75	10.00	10	Robertson Colman
RMITU	Remittance Technology	Mfrs. check remittance equipment	3.5	5.00*	5 1/4	J. W. Gant
SSPW	Sun Sportswear	Designs & sells T-shirts	17.85	10.50	10 1/2	Salomon Bros.
TKF*	Turkish Investment Fund	Closed-end fund	84	12.00	12	Salomon Bros.
VFRU	Vitalfort International	Mfrs. health-food mixtures	3.6	6.00*	7 1/4	Gifford
WGR*	Western Gas Resources	Produces natural gas	37.3	11.50	11 1/4	Prudential-Bache

Initial public offerings sold at \$1 or less not included. First aftermarket bid is approximate. * trading on NYSE; * units of 4 common + 2 warrants; * units of 3 common + 2 warrants. Offering data source: *Going Public: The IPO Reporter*, a publication of The Dealer's Digest Inc., 150 Broadway, New York, NY 10038.

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